

MiniView™

DVI 2/4 PORT USB KVM Switch

User Manual (GCS1762 / GCS1764)



Welcome

Thank you for purchasing one of the most feature-rich DVI KVM with USB peripheral sharing and audio technology on the market. You can save money and space by eliminating the need for multiple DVI monitors, keyboards, mice, and USB peripheral devices such as printers, scanners, and more. Up to 127 USB devices can be daisy chained from this KVMP switch. Sharing speakers and a microphone also offers extra value and convenience for the users.

USB and KVM technology together makes cross-platform management easy. A single USB console can control a PC and a MAC workstation, and share peripherals and audio between the computers.

We hope you enjoy using your Miniview DVI USB KVMP switch, yet another first-rate connectivity solution from IOGEAR

©2005 IOGEAR. All Rights Reserved. PKG-M0140

IOGEAR, the IOGEAR logo, are trademarks or registered trademarks of IOGEAR, Inc. Microsoft and Windows are registered trademarks of Microsoft Corporation. IBM is a registered trademark of International Business Machines, Inc. Macintosh, G3/G4 and iMac are registered trademarks of Apple Computer, Inc. All other brand and product names are trademarks or registered trademarks of their respective holders. IOGEAR makes no warranty of any kind with regards to the information presented in this document. All information furnished here is for informational purposes only and is subject to change without notice. IOGEAR, Inc. assumes no responsibility for any inaccuracies or errors that may appear in this document.

Table of Contents

Package Contents	02
Overview	03
Features	04
System Requirements	05
Introduction	06
Installation	10
Basic Operation	13
Hotkey Operation	15
Firmware Upgrade Utility	29
Appendix	37
Specifications	38
Technical Support	40
Radio & TV Interference Statement	41
Limited Warranty	42

This package contains:

- 1 x GCS1762 or GCS1764 KVMP Switch
- 2 x Custom 6' KVM Cables (GCS1762)
- 4 x Custom 6' KVM Cables (GCS1764)
- 1 x Firmware Upgrade Cable
- 1 x Power Adapter
- 1 x User Manual
- 1 x Quick Start Guide

Check to make sure that all the components are present and that nothing was damaged in shipping. If you encounter a problem, contact your dealer.

Read this manual thoroughly and follow the installation and operation procedures carefully to prevent any damage to the unit, and/or any of the devices that connect to it.

Overview

The GCS1762/GCS1764 DVI KVM Switch charts a revolutionary new direction in KVM switch functionality by combining a switch with a 2 port USB hub at the same time as it provides an interface for a digital monitor (DVI). The new IOGEAR GCS1762/GCS1764 enhances some of the great features found in the MiniView KVM line and adds DVI technology into the mix.

The independent (asynchronous) switching feature, allows the KVM focus to be on one computer while the USB peripheral/Audio focus is on another computer. This gives the user greater control over and more flexibility. It also eliminates the need to purchase a separate USB hub as well as additional speakers set for your other computers; thus reducing cost and maximizing user space.

The Miniview DVI USB KVMP Switch fully supports the DVI specification for both digital video input (flat panel displays, data projectors, plasma displays) and analog video input (traditional monitors).

- Independent switching of KVM video, audio and USB hub
- Fully compliant with USB 1.1 specs for data transfer rates of up to 12 Mbps
- DVI digital and analog monitor support – fully compliant with the DVI specifications
- Computer selection via front panel switches and hotkeys
- LED display for easy status monitoring
- Auto Scan mode for monitoring of all computers
- Complete keyboard emulation for error free booting
- Superior video quality – 1600 x 1200; DDC2B
- Hot pluggable – add or remove computers without powering down the switch
- Supports Windows and MAC systems

System Requirements

Console

DVI monitor compliant with DVI-I specs that can support resolution of KVM switch

USB style mouse

USB style keyboard

Microphone and speakers*

*Must be set of powered speakers

Computer

Available DVI port for video**

Type A USB port

Audio ports

**If computer has VGA port only; you will need to use a DVI to VGA converter

Cables

GCS1762 includes set of 2 cables (6' long)

GCS1764 includes set of 4 cables (6' long)

Front View

1. Port selection buttons

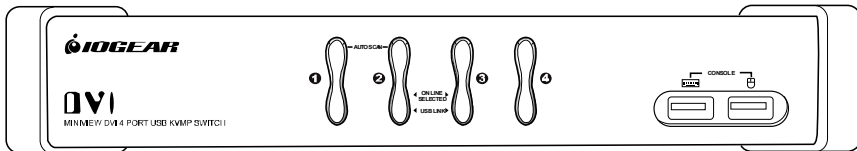
- Press selection button for less than two (2) seconds to bring only the KVM focus to the computer attached to its corresponding port
- Press selection button for longer than two (2) seconds to bring KVM, Audio, and USB Hub focus to the computer attached to its corresponding port.
- Press selection button 1 and 2 simultaneously for two seconds to start *Auto Scan Mode*.

2. Ports LEDs

The Ports LEDs are built into the port selection switches. The upper ones are the KVM port LEDs; the lower ones are the USB LEDs.

KVM LEDs

- Lights DIM ORANGE to indicate that the computer attached to the corresponding port is up and running (On Line).
- Lights BRIGHT ORANGE to indicate that the computer attached to its corresponding port is the one that has the KVM focus (Selected)
- Flashes to indicate that the computer attached to its corresponding port is being accessed under Auto Scan mode.



Introduction

USB LED

- Lights GREEN to indicate that the computer attached to its corresponding port is the one that has access to the USB Peripherals.

3. USB Console ports

Your USB keyboard and USB mouse plug in here.

Back View

1. Firmware Upgrade port

The included Firmware Upgrade cable that transfers the firmware upgrade data from the administrator's computer to the GCS1762/ GCS1764 plugs into this connector.

2. USB Hub ports

Plug your USB peripherals (printers, scanners, etc.) into these ports

3. Console ports

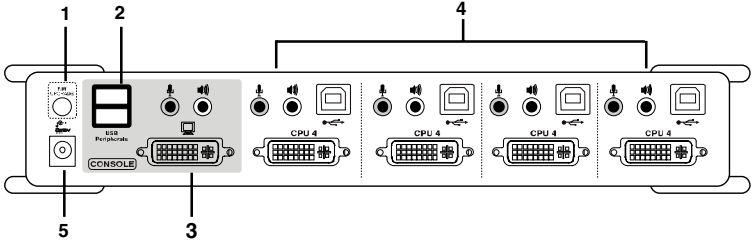
Connect the cables from DVI monitor and speakers to these ports.

4. CPU ports

The cables included with KVM switch plug into here and the other end to your computers.

5. Power Jack

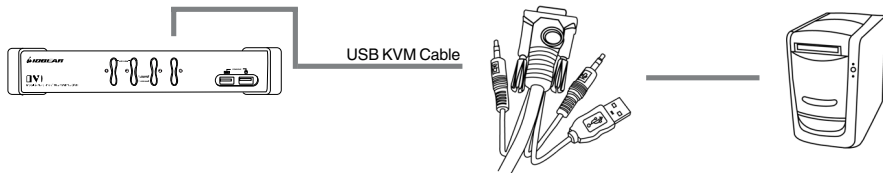
The power adapters plugs into this jack.



Introduction

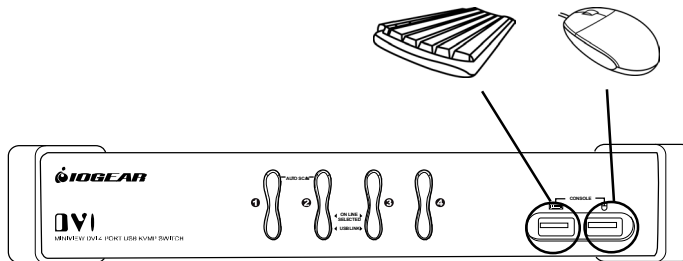
Cable

The USB KVM Cables are included in the package.



Before you Begin

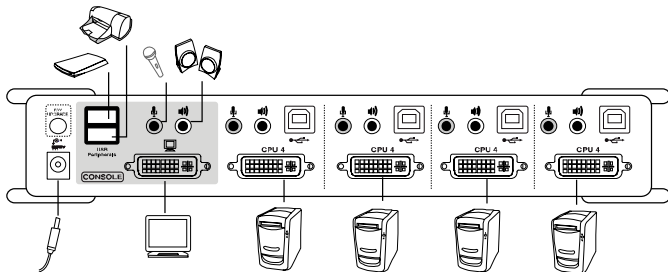
1. Make sure that power to all the devices you will be connecting up has been turned off. You must unplug the power cords of any computers that have the Keyboard Power On function. Otherwise, the switch will receive power from the computer.
2. To prevent damage to your installation, make sure that all devices on the installation are properly grounded.



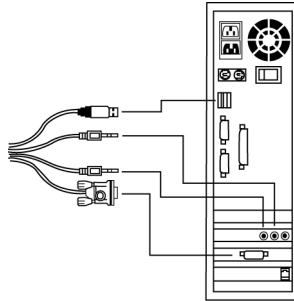
Installation

Setup and Installation

1. Plug your USB keyboard and USB mouse into their corresponding USB ports located on the KVM's front panel.
2. Plug your DVI monitor, microphone, and speaker cables into the Console ports located on the unit's rear panel (left-most section labeled "console").
3. Using one of the included KVM cables, plug the DVI, USB, and Audio connectors into one of the CPU ports on the KVM
4. Plug the other end of the KVM cable to the respective ports on the computer that is part of your installation.
5. Plug the USB peripherals that you want to be part of your KVM setup into the rear USB hub ports



- Repeat steps 3 and 4 for any other computers you are connecting
- Plug the power adapter cable into the switch's power jack, then plug the power adapter into an AC power source
- Turn on the power to the computers



(Connection for USB Computers)

Basic Operation

Hot Plugging

The GCS1762/GCS1764 supports USB hot plugging – components can be removed and added back into the installation by unplugging their cables from the USB hub ports without the need to shut the unit down.

Powering Off and Restarting

If it becomes necessary to Power Off the KVM unit, before starting it back up you must do the following:

1. Shut down all the computers that are attached to the switch.
2. Unplug power adapter cable from the switch
3. Wait 10 seconds, then plug the switch's power adapter cable back in.
4. After the switch is up, Power On the computers.

NOTE: If the KVM switch has become unresponsive or shows erratic behavior, it is highly suggested that you unplug all cables from the KVM (all KVM cables and power cable) and leave the unit disconnected for 30 minutes. After this, plug all the KVM cables back and power ON the unit.

Port ID Numbering

Each CPU port on the GCS1762/GCS1764 switch is assigned a port number (1 or 2 for GCS1762; 1 to 4 for GCS1764). The port numbers are marked on the rear panel of the switch.

The Port ID of a computer is derived from the CPU port number it is connected to. For example, a computer connected to CPU port 2 has a Port ID of 2.

The Port ID is used to specify which computer gets the KVM USB peripheral, and audio focus with the Hotkey port selection method.

Port Switching

There are two ways to access the computers in your KVM setup:

- Manual switching – pressing the push-buttons on the unit's front panel
- Hotkey switching – entering commands from the keyboard

Hotkey Operation

Manual Switching

1. Press and release a port selection switch to bring the KVM focus to the computer attached to its corresponding port. The USB and Audio focus does not change; they stay on the port that they're already on.
2. Press and hold a port selection switch for more than 2 seconds to bring the KVM, USB, and Audio focus to the computer attached to its corresponding port
3. Press and hold port selection switches 1 and 2 for more than two seconds to start Auto Scan Mode. Tip: To stop Auto Scan mode, simply press any of the port selection switches on the KVM.

Hotkey Operation

The GCS1762/GCS1764 provides an extensive, easy-to-use, hotkey function that makes it convenient to control and configure your KVM installation from the keyboard.

NOTE: The table shown next page assumes the use of a PC-compatible keyboard with the *Scroll Lock* key. If you are using a MAC keyboard (or a keyboard that does not have Scroll Lock key), refer to the section in the manual “*Alternate Port Switching Keys*” for information on re-configuring the KVM’s hotkeys



Scroll Lock

PC keyboard

Hotkey Operation

Port Switching

HOTKEY	ACTION
[Scroll Lock] [Scroll Lock] [Enter]	Brings the KVM, USB hub, and Audio focus from the current port to the next port on the KVM.
[Scroll Lock] [Scroll Lock] [K] [Enter]	Brings only the KVM focus from the current port to the next port on the installation. The USB hub and Audio focus remain where they are.
[Scroll Lock] [Scroll Lock] [U] [Enter]	Brings only the USB hub focus from the current port to the next port. The KVM and audio focus remain where they are.
[Scroll Lock] [Scroll Lock] [S] [Enter]	Brings only the audio focus from the current port to the next port. The KVM and USB hub focus remain where they are.
[Scroll Lock] [Scroll Lock] [n] [Enter]	Brings the KVM, USB hub, and audio focus to the computer attached to the port corresponding to the specified Port ID.
[Scroll Lock] [Scroll Lock] [n] [K] [Enter]	Brings only the KVM focus to the computer attached to the specified port. The USB hub and audio focus remain where they are.
[Scroll Lock] [Scroll Lock] [n] [U] [Enter]	Brings only the USB hub focus to the computer attached to the specified port. The KVM and audio focus remain where they are.
[Scroll Lock] [Scroll Lock] [n] [S] [Enter]	Brings only the audio focus to the computer attached to the specified port. The KVM and USB hub focus remain where they are.
[Scroll Lock] [Scroll Lock] [n] [K] [U] [Enter]	Brings the KVM and USB hub focus to the computer attached to the specified port. The audio focus remains where it is.
[Scroll Lock] [Scroll Lock] [n] [K] [S] [Enter]	Brings the KVM and audio focus to the computer attached to the specified port. The USB hub focus remains where it is.
[Scroll Lock] [Scroll Lock] [n] [U] [S] [Enter]	Brings the USB hub and audio focus to the computer attached to the specified port. The KVM focus remains where it is.

Note: The **n** stands for the computer's Port ID number (1, 2, 3, or 4). Replace the **n** with the appropriate Port ID when entering hotkey combinations.

Auto Scanning

Hotkey	Action
[Scroll Lock] [Scroll Lock] [A] [Enter]	Starts Auto Scan The KVM focus cycles from port to port a 5 second intervals.
[Scroll Lock] [Scroll Lock] [A] [n] [Enter]	Starts Auto Scan The KVM focus cycles from port to port at n second intervals The value for n can be 1 to 99.

Note:

- While Auto Scan is active, ordinary keyboard and mouse functions are suspended – only Auto Scan mode compliant keystrokes and mouse clicks can be entered. You must exit Auto Scan mode to regain normal console control.
- Although the video focus switches from port to port, the keyboard, mouse, and USB focus doesn't switch.

Hotkey Operation

Hotkey Setting Mode

Invoking HSM

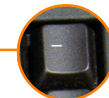
For all Hotkey operations, you must use the *number keypad* on the right side of your keyboard.

To Invoke HSM (PC-Compatible keyboard):

1. Press and hold the **Num Lock** key
2. Press and release the **Minus** key
3. Release the **Num Lock** key within one half second after releasing *Minus* key; otherwise the KVM will not go into Hotkey mode.



Num Lock

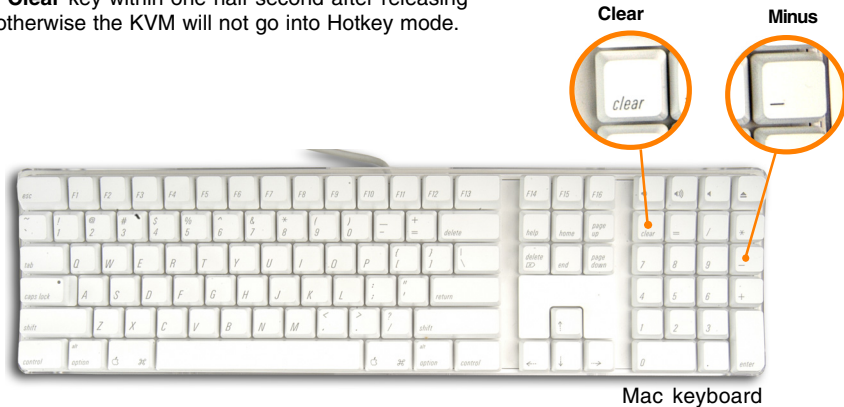


Minus

PC keyboard

To invoke HSM (MAC keyboards):

1. Press and hold the **Clear** key
2. Press and release the **Minus** key
3. Release the **Clear** key within one half second after releasing **Minus** key; otherwise the KVM will not go into Hotkey mode.



Hotkey Operation

Note:

- If using the *Num Lock* and *Minus* key to invoke Hotkey function is not optimal for your setup, refer to the next page to change the hotkey invocation keys.

When HSM is active, the Caps Lock and Scroll Lock LEDs flash in succession to indicate that HSM is in effect. They stop flashing and revert to normal status when you exit HSM.

Ordinary keyboard and mouse functions are suspended – only Hotkey compliant keystrokes and mouse clicks can be input.

At the conclusion of some hotkey operations, you automatically exit Hotkey mode. With some operations, you must exit manually by pressing the **Esc** or **Spacebar** on your keyboard.

Alternate HSM Invocation Keys

In case the default HSM invocation keys (Num Lock and Minus) are not optimal in your setup, you may change them to Ctrl and F12, respectively.

To switch to an alternate HSM invocation, do the following:

1. Invoke HSM (see page 19)
2. Press and release **H**
3. This will change the HSM invocation key to Ctrl and F12 (instead of Num Lock and Minus).

Note: This procedure is a toggle between the two methods. To revert back to the original HSM invocation keys, repeat the above procedure again.

Hotkey Operation

Alternate Port Switching Keys

The port switching activation keys can be changed from tapping Scroll Lock key twice ([Scroll Lock] [Scroll Lock]) to tapping Ctrl key twice ([Ctrl] [Ctrl]).

If you have a MAC keyboard (or your keyboard does not have Scroll Lock), you can change the port switching activation keys by doing the following:

1. Invoke HSM (see page 19)
2. Press and release **T**

Now you can tap [Ctrl], [Ctrl] to switch between ports on your KVM. Please note that any hotkey operations in the manual that use Scroll Lock, will now work with the new [Ctrl][Ctrl] port switching key.

Note: This procedure is a toggle between the two methods. To revert back to the original port switching keys, repeat the above procedure.

Keyboard Operating Platform

The GCS1762/GCS1764 default port configuration is for a PC Compatible keyboard operating platform. If you have a MAC attached to a port, you can change a port's keyboard operating platform configuration as follows:

1. Bring the KVM focus to the desired port
2. Invoke HSM
3. Press and release the appropriate Function key (see table).

FUNCTION KEY	OPERATION
[F2]	Sets the MAC keyboard operating platform.
[F10]	Auto detects the keyboard operating platform (for PC Compatible systems)

Hotkey Operation

List Hotkey Settings

To see a list of the current hotkey settings, do the following:

1. Invoke HSM
2. Open a text editor (such as Notepad or Word)
3. Press F4 on your keyboard to 'paste' this information

USB Reset

If the USB loses focus and needs to be reset, do the following:

1. Invoke HSM
2. Press and release F5 function key

Hotkey Beeper Control

The beep sound the KVM makes when switching can be Toggled ON and OFF by doing the following:

1. Invoke HSM
2. Press and release **B**

Disable Port Switching Keys

To disable the port switching keys (Scroll Lock or Ctrl), please do the following:

1. Invoke HSM
2. Press **[X]** **[Enter]**

Note: This procedure is a toggle. To re-enable the keys, repeat the procedure above.

Firmware Upgrade Mode

To set the GCS1762/GCS1764 in firmware upgrade mode:

1. Invoke HSM
2. Key in: *upgrade*
3. Press [**Enter**]

Note: The front panel LEDs will flash to indicate that the KVM is in firmware upgrade mode. To exit firmware upgrade mode, you must power off the switch.

Restore Default Settings



To reset the GCS1762/GCS1764 to its factory default settings, do the following:

1. Invoke HSM
2. Press [**R**] [**Enter**]
All hotkey settings return to factory default.

Hotkey Operation

MAC Keyboard Emulation

Make sure to first set the KVM to Mac operating platform as instructed on section “Hotkey Operation → keyboard operating platform”

PC KEYBOARD	MAC KEYBOARD
[Shift]	Shift
[Ctrl]	Ctrl
[Win]	
[Ctrl], [4]	
[Alt]	L Alt/Option
[Ptr_Sc]	F13
[Scroll Lock]*	F14
[Desktop Menu]	=
[Enter]	Return
[Backspace]	Delete
[Ins]	Help
[Ctrl], [Win]	F15
[Ctrl], [1]	Mute/Un-mute
[Ctrl], [2]	Vol, Down
[Ctrl], [3]	Vol, Up

Hotkey Default Settings

SETTING	DEFAULT
Port Switching	[Scroll] [Scroll Lock]
Invoking HSM	[Num Lock] [-]
Beeper	ON
Keyboard Operating Platform	PC Compatible
Port Switching Keys	Enabled

The Firmware Upgrade Utility

The Windows-based Firmware Upgrade Utility (FWUpgrade.exe) provides a smooth, automated process for upgrading the KVM switch's firmware. To run the firmware, you will need to use a windows based PC with an available serial port.

The Utility comes as part of a Firmware Upgrade Package that is specific for each device. New firmware upgrade packages are posted on our web site as new firmware revisions become available. Check the web site regularly to find the latest packages and information relating to them:

<http://www.iogear.com>

Before You Begin

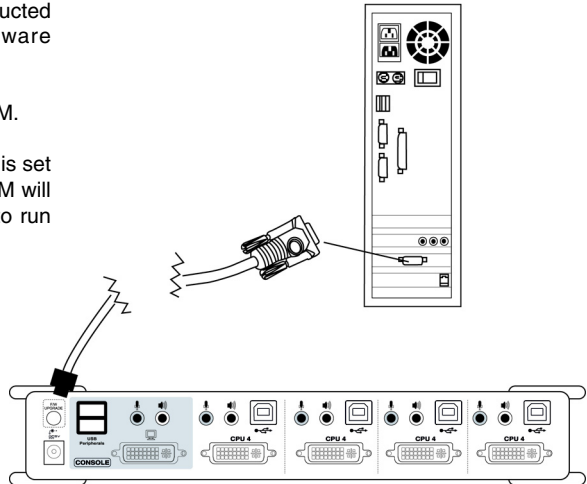
To prepare for the firmware upgrade, do the following:

1. From a computer that is not part of your KVM installation, go to the IOGEAR support site and select the product part number (GCS1762 or GCS1764) to get a list of available Firmware Upgrade Packages.
2. Choose the Firmware Upgrade Package you want to install (usually the most recent), and download it to your computer.
3. Use the *Firmware Upgrade Cable* provided with this unit, to connect to a serial port on your computer to the *Firmware Upgrade Port* of your switch.

The Firmware Upgrade Utility

4. Shut down the computers on your MiniView™ Extreme installation and make sure you have set the KVM in firmware upgrade mode as instructed under section Hotkey operation → Firmware upgrade mode
5. Make sure the power is plugged into the KVM.

Once the power is plugged in and the switch is set to upgrade, all of the amber lights on the KVM will flash once per second. Now you are ready to run the firmware upgrade utility.



The Firmware Upgrade Utility

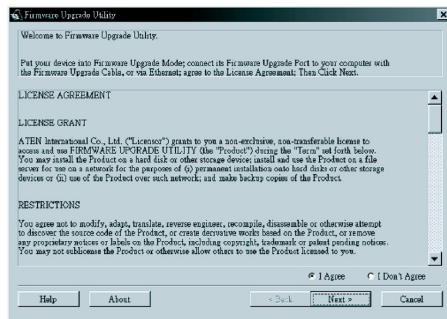
Starting the Upgrade

To upgrade your firmware:

1. Run the downloaded Firmware Upgrade Package file - either by double-clicking the file icon, or by opening a command line and entering the full path to it.

2. The Firmware Upgrade Utility *Welcome* screen appears:

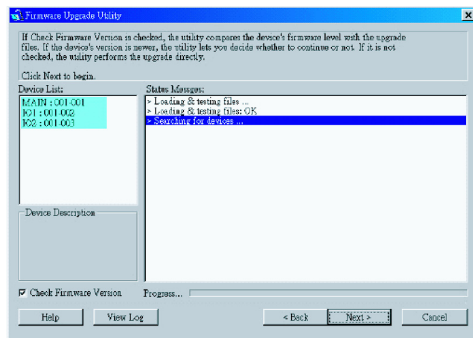
Read and *Agree* to the License Agreement (enable the I Agree radio button).



The Firmware Upgrade Utility

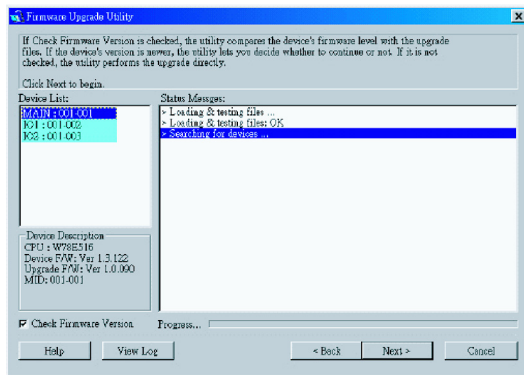
3. Click Next to continue. The Firmware Upgrade Utility main screen appears:

The Utility inspects your installation. All the devices capable of being upgraded by the package are listed in the *Device List* panel.



The Firmware Upgrade Utility

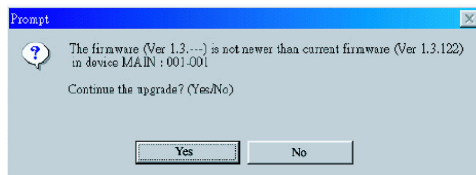
- As you select a device in the list, its description appears in the *Device Description* panel.



The Firmware Upgrade Utility

5. After you have made your device selection(s), Click **Next** to perform the upgrade.

If you enabled *Check Firmware Version*, the Utility compares the device's firmware level with that of the upgrade files. If it finds that the device's version is higher than the upgrade version, it brings up a dialog box informing you of the situation and gives you the option to continue or cancel.



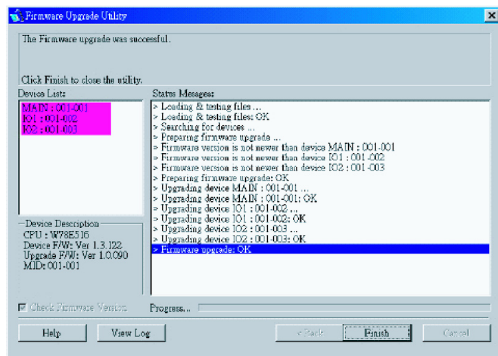
If you didn't enable *Check Firmware Version*, the Utility installs the upgrade files without checking whether they are a higher level, or not.

The Firmware Upgrade Utility

As the Upgrade proceeds status messages appear in the Status Messages panel, and the progress toward completion is shown on the *Progress* bar.

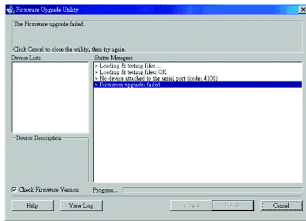
After the upgrade has completed, a screen appears to inform you that the procedure was successful:

Click **Finish** to close the Firmware Upgrade Utility.



The Firmware Upgrade Utility

If the upgrade failed to complete successfully a dialog box appears asking if you want to retry. Click **Yes** to retry. If you click **No**, the *Upgrade Failed* screen appears:



Click **Cancel** to close the Firmware Upgrade Utility. See the next section, *Firmware Upgrade Recovery*, for how to proceed.

Firmware Upgrade Recovery

There are basically three conditions that call for firmware upgrade recovery:

- When you begin a firmware upgrade, but decide not to proceed with it.
- When the Mainboard firmware upgrade fails.
- When the I/O firmware upgrade fails.

To perform a firmware upgrade recovery, do the following:

1. Slide the *Firmware Upgrade Recovery Switch* (see p. 8 drawing) to the **Recover** position.
2. Power off and restart the switch.
3. Slide the *Firmware Upgrade Recovery Switch* back to the **Normal** position.
4. Repeat Step 2.

Appendix

Troubleshooting

Symptom	Possible Cause	Action
Erratic behavior	Unit not receiving enough power	Use a DC 5V power adapter if you are not already using one. If you are already using a power adapter, check that it matches the system specification (DC 5V), and that it is plugged in and functioning properly.
Keyboard and/or Mouse not responding	Keyboard and/or mouse need to be reset	Press and hold port selection switches 1 and 2 for two seconds. (GCS1734 only.)
		Unplug the cable(s) from the console ports(2), then plug it/them back in.
USB devices not responding	No connection to the computer	Check the cable from the switch to the computer to make sure it is properly connected.
	KVM switch needs to be reset	Power off all devices on the installation; power off the KVM switch; wait five seconds; then power up.
		Unplug the device's USB cable from the USB port on the switch's rear panel, then plug it back in.
		Use the USB Reset hotkey combination, to reset the USB ports.

Specification

Function		GCS1762/GCS1764
Scan Interval		1- 99 secs (default: 5 secs)
Operating Temperature		0 - 50 C
Port Selection		Front Panel Switches Hotkey
Storage Temperature		-20 - 60°C
Video Resolution		Up to 1600 x 1200 DDC2B
Power Adaptor		1 x DC 5V Jack
Humidity		0-80% RH
CPU Connectors		
Microphone		2 or 4 x Microphone jack
Keyboard & Mouse		2 or 4 x Stereo earphone jack
Audio		2 or 4 x USB Type B sockets
Monitor		2 or 4 x DVI- ports (female)
Dimensions	Depth	7.87 in (19.99 cm.)
	Width	2.93 in (7.44 cm.)
	Height	1.65 in (4.19 cm.)
Weight	Unit Wt.	1.76 Lbs (0.79 kg.)
Housing	Case	Metal

Specification

Function	GCS1762/GCS1764
Console Connectors	
Mouse	1 x USB Type A socket
Audio	1 x Stereo earphone jack
Keyboard	1 x USB Type A socket
Microphone	1 x Microphone jack
Monitor	1 x DVI - (female) port
LEDs	
USB Peripherals	2 or 4 x Green
On Line	2 or 4 x Orange
Selected	2 or 4 x Orange
Emulation	
Mouse	USB
Keyboard	USB
Computer Connections	
Direct	2 or 4

Technical Support

If you need technical support, please check out our IOGEAR Tech Info Library (T.I.L.) at www.iogear.com/support for the latest tips, tricks, and troubleshooting. The IOGEAR T.I.L. was designed to provide you with the latest technical information about our products. Most of the answers to your questions can be found here, so please try it out before contacting technical support.

Technical support is available Monday through Friday from 8:00 am to 5:00 pm PST and can be reached at (949) 453-8782.

Radio & TV Interference Statement

WARNING!!! This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause interference to radio communications. This equipment has been tested and found to comply with the limits for a Class B computing device pursuant to Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference, in which case the user at his own expense will be required to take whatever measures may be required to correct the interference.

Limited Warranty

IN NO EVENT SHALL THE DIRECT VENDOR'S LIABILITY FOR DIRECT, INDIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OF THE PRODUCT, DISK, OR ITS DOCUMENTATION EXCEED THE PRICE PAID FOR THE PRODUCT.

The direct vendor makes no warranty or representation, expressed, implied, or statutory with respect to the contents or use of this documentation, and especially disclaims its quality, performance, merchantability, or fitness for any particular purpose.

The direct vendor also reserves the right to revise or update the device or documentation without obligation to notify any individual or entity of such revisions, or updates. For further inquiries please contact your direct vendor.



Contact info.

23 Hubble • Irvine, CA 92618 • (P) 949.453.8782 • (F) 949.453.8785 • www.iogear.com